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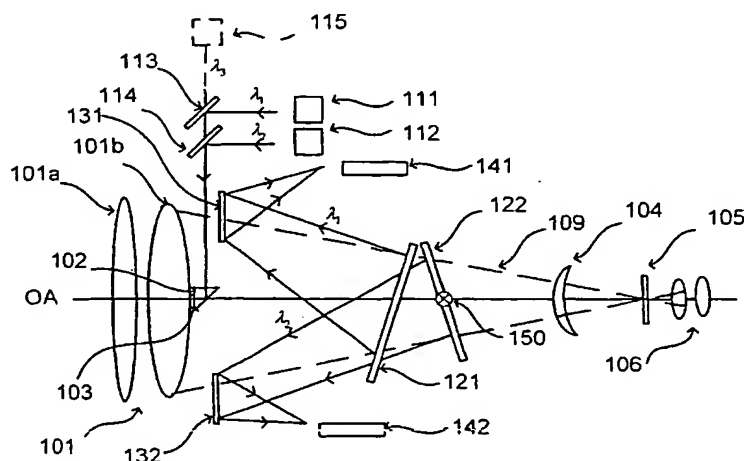
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(54) Title: MULTIPLE OPTICAL CHANNELS



(57) Abstract: The invention relates to an electronic distance measuring apparatus for surveying, e.g. for measuring the distance from the apparatus to an object. The apparatus comprises: a) an objective lens (101), defining an optical axis (OA), b) at least two sources (111, 112) of structured light for transmitting beams (λ_1 , λ_2) of separate wavelengths towards said object, said beams on reflection from said object received by the objective lens (101), (c) at least two receivers (141, 142) arranged outside a beam path (109) as defined by the objective lens (101), and adapted to receive said received beams (λ_1 , λ_2) of structured light. Optical means comprising at least two dichroic surfaces (121a, 122a) are each arranged at a tilt angle (α_1 , α_2) with respect to said axis (OA), said optical axis (OA) passing through said surfaces, at least one of said dichroic surfaces arranged on a plate (121, 122), said at least two dichroic surfaces (121a, 122a) adapted to reflect at least one of said received structured light beams (λ_1 , λ_2), respectively, towards said receivers (141, 142).